Delayed Entry Program (DEP) Management in the 21st Century: How Effective Was the Navy's Cyber DEP Website?

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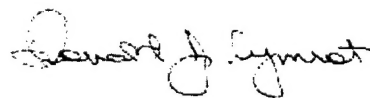20030113 046

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14. ABSTRACT: In November 2000, CNA, in collaboration with the Commander, Navy Recruiting Command (CNRC), launched an experimental DEP Web site, called Cyber DEP, to test whether the Internet could be useful in helping to maintain the motivation of those in DEP, as well as to better prepare DEPers for boot camp and academic training before going on active duty. The Cyber DEP Web site was intended to reduce DEP attrition by providing two basic functions: enhanced communication and e-Learning, both available 24/7. The results of our analysis indicate that the site had a significant impact on reducing DEP attrition and that, in most cases, the more intensively the site was used, the greater the reduction in attrition. The largest category of recruiting costs is recruiter manpower, so, for simplicity, we calculate the returns to the Web site in terms of manpower costs alone. In these terms, our estimated reduction in DEP losses that could accrue if the Web site was continued equate to over $12 million in recruiter compensation.

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Summary

Background

The revolution in Information Technology has drastically changed the way the world conducts business—particularly in terms of communication, commerce, and learning. Although Navy recruiting has successfully used the Internet in recent years as a marketing tool for attracting new recruits, little has been done to incorporate the Internet into other aspects of Navy recruiting, particularly in terms of managing recruits in the Delayed Entry Program (DEP).

In November 2000, CNA, in collaboration with the Commander, Navy Recruiting Command (CNRC), launched an experimental DEP Web site, called Cyber DEP, to test whether the Internet could be useful in helping to maintain the motivation of those in DEP, as well as to better prepare DEPers for boot camp and academic training before going on active duty. This paper summarizes the results of the experiment.

Internet use

The Internet can be a successful tool in managing DEP only if it is accessible and used by large numbers of DEPers. The Navy's enlisted target market, youth age 17 to 26, have almost universal access to the Internet in public schools (virtually 100 percent have access) and public libraries (over 95 percent have access) and, to a lesser extent, at home (41 percent of households have Internet access). Access is correlated with use, with a recent Pew Research Center study reporting that 73 percent of youth age 12 to 17 use the Internet. The most prevalent use of the Internet for all users, regardless of age, is for communicating with friends.

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Cyber DEP Web site

The Cyber DEP Web site was designed to help the Navy achieve its primary goal of DEP—to reduce DEP attrition. The DEP program accomplishes this by teaching new recruits about the Navy, and by preparing them both mentally and physically for their new life. It serves to indoctrinate the DEPer to Navy culture, and creating a DEP community with fellow DEPers helps to serve these goals.

The Cyber DEP Web site was intended to serve these goals by providing two basic functions: communication and e-Learning. The basic premise behind the Web site is that an opportunity for learning about the Navy and communication with recruiters and fellow DEPers 24/7 could allow for greater Navy indoctrination, and thereby reduce DEP attrition. This has become particularly important in recent years, as the Navy has faced increasing recruiting difficulties. As a consequence of these difficulties, recruiters have less time to spend with DEPers, and DEPers are spending less time in DEP, resulting in fewer opportunities to learn about Navy life, pass the Personal Qualifications Standards (PQS), and become indoctrinated to the Navy.

Communication was made possible on the site with the use of forums, which allowed DEPers across the nation to participate in online dialogues to discuss concerns, ask questions, and even form friendships. These online exchanges allowed DEPers to interact with other DEPers or recruiters anytime, outside the more formal DEP meetings, thereby increasing the frequency of Navy interaction.

The second function of the Web site was to allow the DEPer to learn material necessary on, and to take tests for, the PQS online. By posting the material and exams on the site, the DEPer could learn at his or her own pace and, if necessary, compress the normal curriculum into a much shorter time frame to suit the DEPer's limited time in DEP. In addition, other Navy-related information was posted on the Web site to form a centralized and tailored source of information useful to DEPers, allowing them to learn as much or as little about the Navy as they desired before going on active duty.

The Web site was intended as a proof of concept. Therefore, it did not incorporate an entire array of functions that could ultimately be

useful in managing DEP, such as chat rooms, rating-specific information, Navy Learning courses, or even unclassified Navy A-school curriculum to give highly motivated DEPers the opportunity to start their technical training while still in DEP.

Experiment

The Cyber DEP experiment was conducted between November 2000 and July 2001. The Commander, Navy Recruiting Command notified the Commanding Officers and Command Master Chiefs of each Navy Recruiting District (NRD) of the experiment. At the conclusion of the experiment, only 21 percent of all stations had at least one DEPer ever log onto the site, with a total of 629 DEPers participating in the experiment. We cannot determine why use was so low, but with less than 20 percent of stations ever logging on to the Web site, it seems likely that a large number of field recruiters either did not receive guidance on the site or had difficulty connecting to the Internet.

We confine our analysis to recruits in the Nuclear Field (NF), Gendets, and 4-year obligors with a School Guarantee (4YO SG). We chose these three categories of recruits because we felt that they were fairly representative of the full spectrum of Navy recruits, and we wanted to control for as many extraneous factors that influence attrition as possible.

We defined three levels of Web site use: ever log on, log on more than once, and took at least one PQS test online. We conducted a multivariate analysis to determine the effect of the various levels of Web site use on DEP attrition, while controlling for other factors that have an impact on attrition.

The results of our analysis indicate that the site had a significant impact on reducing DEP attrition for recruits in all three categories and that, in most cases, the more intensive the participation, the greater the reduction in attrition. For instance, we predict that (a) the DEP attrition of Nuclear Field recruits who ever took a PQS test online is 77 percent lower than otherwise identical NF recruits who never took a test, (b) the attrition for Gendets who ever took a test is 61 percent lower than those who did not, and (c) the attrition of 4YO SGs

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who logged on more than once is 57 percent lower than those who never logged on or who logged on only once.

If we extrapolate these results to all DEPers, and assume that just 50 percent of all DEPers used the Web site, we estimate that 3,700 fewer DEPers would have attrited in FY01. This reduction in DEP attrition could allow the Navy to meet the same recruiting mission with fewer recruiters, as well as with fewer resources devoted to marketing, enlistment incentives, and other recruiting support, thereby increasing the efficiency of recruiting.

The largest category of recruiting costs is recruiter manpower, so, for simplicity, we calculate the value of this increased efficiency in terms of manpower costs alone. In these terms, our estimated reduction in DEP losses equates to over $12 million in recruiter compensation.

Recommendations

Our experience has shown us that it is possible to build and maintain a Cyber DEP Web site that contains the basic functions that were provided in the experimental Web site for an annual cost of less than $500,000. Given our estimate of the benefits that could result from such a Web site, the investment would certainly be cost-effective.

It is not enough, however, to develop and maintain the Web site. Given the low use rate by both DEPers and recruiting personnel for this experiment, CNRC will need to train recruiting personnel on the use and usefulness of such a site. This involves not just an understanding of the technology but, perhaps more difficult, a change in how the Navy approaches and utilizes the Internet. Part of the difficulty may be that recruiters have limited access to the Internet at their desks, and part may be reluctance of recruiters to use new technology. But we contend that high-quality youth will increasingly demand such high-tech methods of learning and communicating, and it will become increasingly difficult for the Navy to pursue 21st-century recruits with 20th-century recruiting tools.

Introduction

The Internet has dramatically changed the way the world conducts business—particularly in terms of communication, commerce, and learning. This technology has provided opportunities for businesses to reduce the cost to train, advertise, hire, and communicate with clients and workers, as well as to expand markets to a virtual global community. People are turning more and more to the Internet as a source of information and entertainment, as a marketplace, and as a tool for communicating with friends and family.

In the past several years, the Navy has used the Internet successfully as a marketing tool to attract new recruits. Recently, Navy recruiting launched an "accelerate your life" campaign on a revamped Web site. It has also increasingly relied on Internet job posting sites to attract potential recruits into both the enlisted and officer ranks.

CNA has worked with the Navy for a number of years to incorporate technology into recruiting, including the use of CD-ROMs for marketing and the creation of a Cyberspace recruiting team. Our research in this field suggested that many of the features of the Internet had the potential to enhance the efficiency of the management of the enlisted Delayed Entry Program (DEP). In particular, the ability to communicate with large numbers of people spread across a large geographic area and to take courses and conduct research via the Internet could be very effective in the DEP program. This part of Navy recruiting has been virtually unaffected by the growth of the Internet, yet technology may offer some of the greatest opportunities for savings—in both Navy recruiting and Navy training.

In November 2000, CNA, in collaboration with CNRC, launched an experimental Internet DEP site, called Cyber DEP, to test whether the Internet could be used to help maintain the motivation of those in DEP, to better prepare new recruits for boot camp and academic training, and to create a greater sense of Navy fellowship before going

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on active duty. If successful, the site could reduce DEP, boot camp, and/or A-school attrition, as well as reduce the amount of time to train new recruits. This research memorandum describes the content of the Web site, the parameters of the experiment, and its outcome.

Before describing the experiment, we first establish the case of how the Internet has changed the way both businesses and individuals conduct even basic functions. In particular, we will focus on the Internet as a tool for communication and for e-Learning, the two areas that we feel have the greatest potential to benefit Navy recruiting.

The next section gives a more detailed description of Navy DEP management, the traditional curriculum, and DEP trends.

The last section describes the Cyber DEP experiment in detail, including components of the site, feedback and use rates, and an analysis of whether the site was useful in reducing DEP attrition.

The Internet phenomenon

The growth of the Internet is a phenomenon with few parallels in history. It has grown from a Department of Defense experiment in 1960 to a pervasive technology that is now as commonplace as the television was in the mid-20th century. According to the Department of Commerce, in August 2000, 44.4 percent of *all* Americans were online—an increase of over 32 percent in just 20 months [1].

Access

Americans access the Internet from a variety of places. For instance, according to [1], in August 2000, 41.5 percent of households had home Internet access, a 58-percent increase from December 1998.

Figure 1 shows that the distribution of households with Internet access is not uniform across race and income levels. The groups with the greatest growth between December 1998 and August 2000, however, were African Americans (a 109-percent increase) and those with incomes between $15,000 and $24,999 (a 93-percent increase).

According to the same Commerce report, the most common place for Internet use for those who go online outside the home was at work, with 23.9 percent of employed individuals using the Internet at work. The second most common place was school (3.7 percent), followed by public libraries (1.9 percent).

How pervasive is online access in schools? Figure 2 shows the rapid growth in Internet access for students attending public secondary schools in the United States, the Navy's largest enlisted recruiting market. Between 1994 and 2000, the percentage of these schools with Internet access doubled and was virtually 100 percent 1 year ago. In that same year, 80 percent of public secondary schools reported making the Internet available to students outside regular school hours [2].

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Figure 1.   Percentage of households with Internet access[a]

a. Source: [1].

Figure 2.   Percentage of public secondary schools with Internet access[a]

a. Source: [2].

Public library access has grown similarly. A study by the National Commission on Libraries and Information Science found that, in 2000, the vast majority of public library outlets—over 95 percent—had access to the Internet. Of those outlets that have access, almost 95 percent provided Internet access to the public [3].

So, the vast majority of those who actively seek to use the Internet can get access. In particular, almost all of the Navy's enlisted target market, youth age 17 to 26, have online access in high school, college, public libraries, at work, or at home.

But does access translate into use? We will look at these trends next.

Online activities

Common uses

The Internet serves a variety of purposes, which largely depend on a person's age, labor force participation, gender, race, socioeconomic status, and, of course, whether one is online in the capacity of a consumer or as a business. For instance, according to [1], 80 percent of online users have used the Internet to send and receive e-mail—more than any other online activity. The next most popular activities were research (59 percent) and checking news, weather, and sports (43 percent).

But what are the online habits of the Navy's primary enlisted recruiting market? First, recent studies have found that the majority of youth do go online. The U.S. Commerce Department's study [1] estimated that, in August 2000, 56.8 percent of people age 18 to 25 used the Internet. This is an increase of 28 percent from December 1998. The pattern of use by race and income is similar to those in figure 1, except with higher rates of use within each category.

Younger teens have an even higher rate of use. According to a recent Pew Research Center study [4], 73 percent of youth age 12 to 17 use the Internet. This may be due, in some part, to the almost universal access of students.

Although the most prevalent online activity of all users is research and communication with friends, this is not uniform across all age groups. The Pew study found that online activities among teenagers differ by narrow age ranges even within this age group. Table 1 summarizes its major findings for 12- to 17-year-olds. Where reported, we note the percentage of older teens, 14 to 17, who use the Internet for

a specific activity because these older teens are the closest in age to the Navy's primary teenage recruiting market.

Table 1. Major online activities of youth age 12 to 17[a]

Activity	Percentage
Send or receive e-mail	92
Surf the Web for fun	84
Visit an entertainment site	83
Send an instant message	74
Get news[b]	73
Research a product or service[b]	71
Look for information on hobbies	69
Download music[b]	61
Visit a chat room[b]	60
Listen to music	59
Play or download a game[b]	58
Check sports scores	47
Visit a site for a club or team[b]	44

a. Source: [4].
b. Youth age 14-17.

Unlike the overall population, teenagers are more apt to use the Internet as a means to communicate with friends and as a source of entertainment. Even so, the majority of teenagers who go online report using the Internet as a source of information about products, sports, and news. We note that 44 percent of online older teens report visiting a Web site of a club or team of which they are a member. We will come back to this point later, when we discuss one of the roles of the Cyber DEP Web site.

e-Learning

Learning that can be conducted via the Internet or other electronic devices—e-Learning—has experienced rapid growth as well. In the past several years, colleges and universities have converted a large number of conventional classroom courses to synchronous and/or asynchronous Internet courses, CD-ROMs, and videos. The new Navy

College Program has required distance learning capabilities of all partner colleges, with the majority providing such opportunities via the Web. According to the Department of Commerce, 35 percent of online users report having used the Internet to take a course [1].

The benefits of e-Learning are numerous. For the individual learner, it allows the flexibility of being able to learn any time, and virtually any place, at the individual's own pace. This flexibility accommodates people who learn at different rates. In traditional classroom settings, those who "get it" faster are held back because of the tendency to teach to either the slowest learner or, at best, the median learner.

Learning is also enhanced by electronic delivery systems that follow a "smart-tutor" methodology. In these methods, students are asked for feedback, particularly in the form of answering a question, to assess their understanding of the material. Based on their answers, they are redirected to either review components of the material that were not well understood or to move on to new material. The Defense Science Board [5] noted that tutoring students results in a decreased time-to-train, as well as an enhanced comprehension of the material. Its report summarizes studies that have found that students who receive tutoring, either in person or by automation, experience a two-standard-deviation improvement in the quality of their skills.

Other benefits include the fact that, particularly for Internet-based e-Learning, content can be quickly changed and updated as new information becomes available. In addition, e-Learning maximizes the consistency of material covered because traditional classroom dynamics and instructor personality can affect both the pace and the content of classroom instruction. With e-Learning, content remains constant and can be used to train thousands of people either synchronously or asynchronously. The physical properties of a classroom and limitations of one person to answer a large number of questions severely constrain the number of people who can be taught by an instructor in more traditional classroom settings.

Finally, American businesses have realized significant savings in using e-Learning methods. Studies have shown that an average of 50 percent time savings is realized with e-Learning over classroom learning [6]. Although the returns to training are usually significant, the time

spent while in training is nonproductive, the costs of which are typically measured in terms of a person's wages earned during training.

Savings in e-Learning come not only from a reduced time to train, but also from a reduction in the cost of travel and accommodations to send employees to traditional training venues. Savings in converting traditional training to e-Learning vary significantly, depending on the size of the corporation, the type of training, and so on. A report in *Training Magazine* cited in [6] found that corporations save 50 to 70 percent of the cost to train when they replace instructor-led training with electronic delivery. Likewise, the Defense Science Board [5] concluded that the Department of Defense could save over $1 billion each year by reducing the time to learn from converting traditional schoolhouse courses to self-paced training.

Note, however, that e-Learning is not a panacea for all types of learning and for all types of learners. Human performance experts note that people learn in a variety of ways, and different types of tasks require different types of learning. Just as the past pervasive solution of brick-and-mortar training was not appropriate, neither is a future strategy of exclusive e-Learning. For instance, current technology makes it difficult for e-Learning to replace the more traditional methods of teaching the fine arts, where it is difficult to assess a student's comprehension of the material or progression in skill via the Internet. As desktop video cameras become more commonplace, this obstacle may become less of an issue.

Also, some controversy exists as to whether all individuals are capable of learning material that is otherwise well-suited to electronic methods because they seem to require immediate feedback or more human interaction. This may also become less of a problem with an increase in desktop cameras, and as the use of electronic classrooms becomes more commonplace in public education.

CNO's Executive Review of Navy Training

Our discussion of the benefits of e-Learning has particular significance for the Navy. In October 2000, the CNO chartered the Executive Review of Navy Training (ERNT) to develop a strategy and

implementation plan for revolutionizing Navy training, including the incorporation of new technologies and exploitation of opportunities available from the private sector. The charter also included the development of a continuum of lifelong learning and personal and professional development for Sailors [7].

Many of the findings of the ERNT team involved the incorporation of e-Learning, where appropriate, into Navy training systems. Because of the proven savings and enhanced quality of training, the team set as a stretch goal a shift of 50 percent of classroom training to e-Learning in 3 years.

Another part of the charter, to develop a lifelong learning continuum for Sailors, was viewed by the team as vital in helping the Navy win the "War for Talent." The study found a tremendous gap between what the Navy is prepared to offer in terms of personal and professional learning and what is demanded by high-quality current and potential Sailors who will be required to man an increasingly high-tech Navy. Although it is difficult to measure precisely what these increasing technical requirements will be, the study cited the increase in technical training requirements for the newer, Arleigh Burke DDG-51 class of destroyer, versus the older Spruance class, as an example of what the future may bring. For instance, the average number of Navy Enlisted Classifications (NECs) required of E-5 Sailors on the newer destroyers is 39 percent greater than those required of their cohorts on the older class of ship.

We note the findings and recommendations of the ERNT team because they are consonant with many of the intended goals of the Cyber DEP Web site, which we outline in the next section. The ERNT team understood that the continuum must begin with the recruiting and DEP phase of a Sailor's career, recognizing that this is a phase that has traditionally provided little in terms of education and training. To address some of these issues, the team suggested that the Navy expand learning opportunities for those in DEP, including making use of the Internet to provide e-Learning opportunities.

We turn now to a discussion of Navy DEP, with an emphasis on current recruiting challenges that have had a negative impact on DEP, as well as an overview of DEP management.

Navy DEP issues

After processing and signing a contract to join the Navy, all enlisted recruits spend at least a few days in DEP. Navy recruiting spends a significant amount of money on marketing, recruiting, and processing interested and eligible individuals. As a consequence, each recruit in DEP represents a considerable investment. Those who attrite from DEP must be replaced, representing a significant loss to the individual recruiter, and to Navy recruiting as a whole. So, in addition to finding interested candidates, recruiters must maintain motivation and eligibility of their recruits in DEP to ensure that they do not fail to obligate.

Recruiting difficulties

Recently, the first step in recruiting—locating high-quality and motivated youth—has become more difficult for Navy enlisted recruiters. We have documented some of these difficulties [8, 9], which have resulted in a reduction in overall recruit quality,[1] a reduction in the beginning of year (BOY) DEP pool, and a sharp increase in the cost to recruit. Many of the recruiting difficulties create problems in training or in the fleet, as lower quality recruits experience higher boot camp attrition, which means that fewer Sailors reach the fleet [8].

Such factors as a low civilian unemployment rate, increasing college enrollment of high school graduates, and a reduced veteran population have meant that recruiters have to spend more time identifying qualified recruits. Evidence of this increasing difficulty is the average cost to recruit, which has increased 90 percent in real terms since FY93, to its current value of over $10,000 per enlisted Sailor.[2] This

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1. Quality is defined as recruits who are high school degree graduates who score in the upper half of the Armed Forces Qualification Test (AFQT).

2. Source: CNRC Code N53.

increase has been largely driven by significantly larger enlistment incentives and an increase in the number of recruiters required to meet the recruiting mission.

Time in DEP

The time recruits spend in DEP varies from a few days to up to 1 year,[3] depending on such factors as the availability of the recruit (those still in high school typically have the longest DEP time), availability of A-schools, and time of year.

Some recruits may ship to boot camp in a matter of days after signing a contract, allowing them little time to prepare—academically, physically, or emotionally—for the rigors of recruit training. Historically, recruits with a short period of time in DEP have lower DEP attrition, but they experience higher boot camp attrition than those with a few months or more in DEP. At the other extreme, some DEPers may spend as long as a year or more in DEP, which allows them ample time to prepare, but also to explore other opportunities, such as college or employment. These DEPers require frequent interaction with their recruiter or fellow DEPers to maintain interest in the Navy. DEPers with a long time in DEP—more than 3 or 4 months—have higher DEP attrition, but those who do ship typically experience lower boot camp attrition, in part because they have had a longer time to prepare and to become committed.

DEP is probably the least developed and the least emphasized component of all of Navy recruiting. For instance, there is no one on the staff at Navy recruiting command headquarters whose sole responsibility is DEP management. There are people in charge of enlisted waivers, the recruiting manual, the nuclear field, and leads, to mention a few, but DEP is left to the individual districts and zones to manage. In addition, the enlisted Navy recruiting manual, which outlines all of the policies and instructions governing enlisted recruiting, has just 17 out of 473 pages, or less than 4 percent, dedicated to DEP.

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3. Time in DEP greater than 1 year requires a waiver.

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Navy recruiting does have a prescribed set of activities for recruiters to pursue with their DEPers, such as periodic phone calls, group DEP meetings, and administration of the Personal Qualification Standards (PQS) tests. DEPers who successfully complete this course of study are automatically promoted to E2 upon accession. Often it is not possible for recruiters to pursue these activities with each DEPer, either because of time constraints, or because the DEPer has limited availability. The difficult recruiting environment exacerbates both of these problems.

The time constraints are created because, as recruiters spend more time on finding qualified recruits, they have less time to spend in DEP management. And because of the decrease in BOY DEP, recruits are spending a diminishing amount of time in DEP. With less time in DEP, and less time with his or her recruiter and fellow DEPers, each recruit has less time to learn about the Navy, to prepare physically and mentally, and to become more indoctrinated to Navy life.
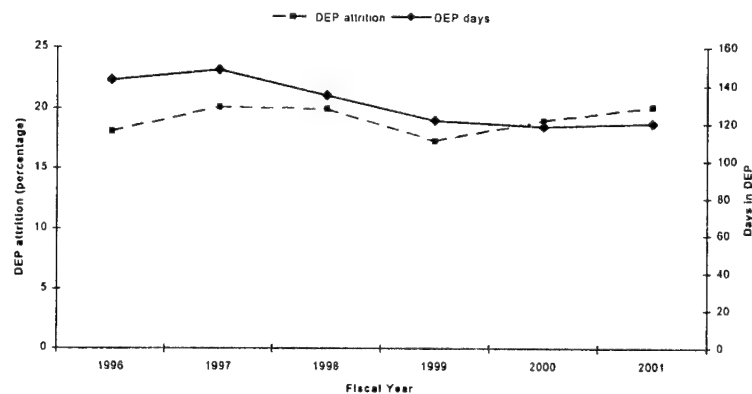
Between FY96 and FY01, the amount of time that each recruit spent in DEP declined almost 20 percent—from a little over 4 months to slightly more than 3 months.[4] This time period has also seen a slight increase in DEP attrition, in spite of the decreased time spent in DEP. Figure 3 illustrates this phenomenon for A-cells (the highest quality recruits) who have experienced a decrease in time in DEP of 16 percent. The average time in DEP for A-cells is typically longer than for other categories of recruits because they are largely composed of high school seniors who enlist during their senior year and wait until the summer to ship.

After experiencing a rather sharp decrease in DEP attrition between FY98 and FY99, DEP attrition for A-cells has returned to the same rate that it was in FY97—about 20 percent. In FY01, this represented over 6,800 high-quality recruits who did not access after signing a contract. Certainly, some of these losses were unpreventable because of health

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4. This information comes from PRIDE, the Navy's enlisted reservation database. We define DEP attrition as the number of recruits with a DEP attrition code divided by the total number of DEPers who either attrited or shipped in that fiscal year.

problems and the like. Furthermore, some losses during DEP are considered to be more cost-effective than having the Navy incur the cost of sending the recruit to boot camp, only to attrite there. What percentage of these 6,800 losses fit into these categories is uncertain, but certainly some attrition can be attributed to lack of motivation or other factors that may have been preventable with a more intensive DEP experience.[5]

Figure 3. A-cell time in DEP and DEP attrition in FY96 to FY01

Finally, in addition to the DEPer's and recruiter's time availability, a person's experiences in DEP depend on a number of other factors that may or may not be within the purview of the recruiter to control, such as:

- The number and mix of other DEPers in the station, which may affect the quality and/or size of group DEP meetings and interaction.

- Accessibility of the recruiting station, either because of distance or hours of operation. Some DEPers may find it difficult to

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5. Reasons for DEP attrition are given in PRIDE, but we are not confident in the accuracy of reporting. In other words, a Navy classifier may code a loss as due to employment, but the reason for the employment may in fact be lack of motivation.

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attend DEP meetings because they do not have a car or their work schedule precludes them from attending DEP meetings.

- Significant world events requiring military involvement, such as the September 11th terrorist attack or the bombing of USS *Cole* in October 2000.

We turn next to Cyber DEP, including an overview of the concept and a description of the experiment and results.

Cyber DEP experiment

The primary goal of the Navy's DEP program is to reduce DEP attrition; reducing boot camp attrition is a secondary goal. The program attempts to meet these goals by teaching new recruits about Navy life, terminology, history, and traditions, as well as preparing them physically and mentally for their new life. It serves to indoctrinate the DEPer to Navy culture, and creating a DEP community with fellow DEPers helps to serve these goals.

Functions of Cyber DEP

The Cyber DEP Web site was intended to help achieve these basic goals, plus a few more, including (a) decreasing A-school attrition, (b) freeing up recruiter's time that could be spent in finding higher quality recruits or building up the DEP pool, (c) reducing the time to train Sailors, and (d) attracting higher quality recruits in general. We will discuss how the site could serve each of these goals.

Reduce attrition

Attrition at various points in a Sailor's career has different causes, and the further away in time from DEP a Sailor is, the less likely that an online DEP experience would have an influence. So, probably the greatest influence of the Web site in reducing attrition would be during DEP.

Though no definitive study has been conducted on why DEPers refuse to obligate, one significant reason is lack of motivation. For example, a DEPer may find a good job while waiting to go on active duty, or decide to go to college, or become involved in a romantic relationship and no longer want to move away. Other common reasons include peer pressure and being disqualified for drug use, criminal activity, or pregnancy.

An Internet-based DEP site has the potential to mitigate some of these problems by offering DEPers the opportunity to communicate with each other, 24 hours a day, 7 days a week. Forums[6] and chat rooms allow participants to express concerns or fears, to ask questions about what to take to boot camp, or to find out if rumors they heard are true. Other DEPers or recruiters can address the concerns in their responses. Each DEPer doesn't have to track down his or her recruiter, or wait for the next DEP meeting, to ask the question. These dialogues are observable by everyone who is in DEP, and anyone who wishes can respond or post his or her own questions. A nationwide DEP audience participating in the forums ensures that everyone is getting the same information, thereby reducing misunderstandings and misinformation.

These forums also provide an opportunity for DEPers to get to know each other and perhaps form friendships through virtual dialogues. In this way, DEPers can interact with each other outside more formal, and fairly infrequent, DEP meetings, and the DEP community is expanded beyond a local area. These opportunities to communicate with each other may foster a greater sense of Navy/DEP fellowship among some of the tens of thousands of DEPers in the nation.

Taking this a step further, if the Web site posted each DEPer's picture with a short biography, including enlistment date, each DEPer would be able to locate and start communicating with those who will go to boot camp on the same day. Knowing that you will see a familiar face as you get off the bus may allay some of the fears that many young people have as they decide whether or not to obligate.

So, a DEP Web site has the potential to reduce DEP attrition by providing greater communication opportunities that could (a) reduce the fears and apprehension that many DEPers feel, (b) reduce apathy

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6. Forums are messages posted by individual users that are organized by topic. Typically, they begin with a person posting a question or a comment, followed by exchanges by participants that may span hours, days, or even months. Unlike chat rooms, they do not require other participants to be online at the same time, and the messages do not disappear at the end of the chat.

or disinterest by more frequent Navy interaction, and (c) foster a greater sense of Navy fellowship.

The Web site may also be able to reduce both DEP and active duty attrition by providing greater opportunities for Navy indoctrination. By tailoring and centralizing information about the Navy on the Web site (e.g., the DEP Personal Qualification Standards (PQS) and rating-specific information such as that provided by the Chief of Naval Personnel on career progression), DEPers can absorb as much or as little information about the Navy as they desire before going on active duty, while minimizing the time spent searching for relevant material.

The more that DEPers learn and understand, the more indoctrinated they may be, which may result in lower attrition. Such information is available but not in a central location. For instance, only some of the information that is required to pass the PQS tests, and thus be advanced before going on active duty, is provided to new DEPers in paper format. A large portion of the material is covered in DEP lectures, which the DEPer may or may not be able to attend given the timing of his or her enlistment. An online curriculum enables DEPers to cover all of the material necessary to pass the PQS in a shorter period of time. While it is possible for DEPers with as little as 1 week in DEP to pass the PQS, it requires a tremendous time commitment on the part of the DEPer's recruiter. Having multiple DEPers in the same situation does not necessarily reduce the time required of the recruiter if he or she cannot manage to get DEPers to meet at the same time. An online curriculum does not have the same obstacles.

Save recruiters' time

A large portion of the time that recruiters spend on DEP management is in training for, and administration of, the PQS. As we have already discussed, an online PQS curriculum would save the recruiter from covering the same material numerous times each month, to accommodate various schedules or to get new DEPers up to speed. In addition, the Internet provides the opportunity to administer and grade tests electronically, without requiring the intervention (and thus time) of a recruiter.

Recruiters also spend time keeping in touch with their DEPers, and notifying them of meetings, changes in policy, and so on. If all DEPers were using the Web site, such messages could be posted one time for everyone in a station, zone, or even nationwide. Also, the Internet allows e-mail messages to be sent to someone from a site (but not from someone to the site). In that way, DEPers who do not have e-mail can communicate electronically with their recruiter one-on-one, instead of in front of a nationwide forum audience.

In addition, having DEPers take tests online allows recruiters to look up the progress of each DEPer in terms of the PQS tests, and to view messages posted to the forum. For instance, if a recruiter's DEPer appears to be failing a number of the PQS tests, a recruiter might want to call him or her in to discuss the problem. Likewise, if a DEPer is posting comments to the forum that appear to the recruiter to indicate a flagging interest or increasing reluctance, the recruiter can contact the DEPer to provide counsel.

Finally, an online DEP site allows for nationwide DEP meetings, either synchronously (e.g., a chat room meeting) or asynchronously (e.g., downloading a prerecorded video). Again, this ensures uniformity of information received by all DEPers.

We do not mean to imply in this section that a Web site could, or even should, replace individual interaction between a recruiter and DEPer. We contend, however, that there are certain functions a recruiter currently serves that, if reduced or eliminated, would not negatively affect a DEPer's experience. We also contend that busy recruiters often don't find the time to serve many of these functions fully, particularly for DEPers with a short period of time in DEP. Thus, providing an online option for the function does not reduce face time between a recruiter and DEPer but instead enhances the DEPer's experiences.

Reduce time to train

The use of e-Learning curricula on a DEP Web site may reduce total time to train while on active duty. Overexecution of the student portion of the Individual's Account (IA) is a serious concern to Navy leadership, and was one of the major issues addressed by the ERNT.

For instance, for FY02, the enlisted student account is underfunded by over 8,600 billets, a deficit that is predicted to persist throughout the Future Year's Defense Plan (FYDP), resulting in a $2.6-billion shortfall. These unfunded and overexecuted student billets result in large numbers of unmanned billets in the fleet [7].

Many Sailors spend some time in academic setbacks in A-school, which could be reduced if they had the opportunity to cover the material while in DEP. For instance, a DEP Web site could include remedial training for those· in a school guarantee program, saving time that might otherwise have to be taken in covering the material while on active duty.

Further, some of the A-school curricula have already been converted to self-paced electronic media, such as the Advanced Electronics/ Computer Field (AECF) core fundamentals. A-school guarantee DEPers could complete some or all of this type of learning before going on active duty, thus reducing the time they spend in training.

Finally, simply introducing DEPers to the types of material that will be covered in training while on active duty might serve to enhance their motivation to obligate. Basic information concerning food safety and handling could be made available to those with a Mess Specialist school guarantee, or basic principles of flight could be made available to anyone in an aviation rating. Such material would not have to be Navy specific; it could be generic information that serves to increase the interest and preparation of DEPers before they embark on their more formal training.

The Navy Learning Web site offers hundreds of courses to active duty personnel, retirees, and reservists.[7] A large portion of the material is in information technology (IT), and even allows Sailors to take courses that could qualify them for an IT rating NEC. There is no provision at present for DEPers to access this Web site, but certainly many could benefit by taking courses offered through this service, particularly in learning the basics of computer software (PowerPoint, Excel,

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7. To gain access to Navy Learning, a person must be in the Defense Enrollment Eligibility Reporting System (DEERS) database.

Word, etc.). A Cyber DEP Web site could serve as a gateway to this site, providing both access and knowledge of this opportunity that might not otherwise be available to DEPers.

Expand the market

The college market is large and relatively untapped by enlisted recruiters. This includes high school seniors who are college-bound, 2-year college graduates, and college dropouts. We have documented elsewhere the benefits of tapping into this market, particularly in light of the Navy's increasing requirements for highly skilled, high-quality recruits [10, 11, 12]. A DEP Web site that became the gateway to pursuit of some of these Navy educational benefits, such as the Navy College Program and Tech Prep, could help attract and maintain the interest of those who might otherwise forgo the Navy in favor of a college education. Allowing DEPers to start on their college path might not only help attract this market in the first place but also help to fulfill the goal of 84 percent of new enlisted recruits who say they want to work on a college degree during enlistment. The majority of these never accomplish this goal [8]. Providing such an opportunity is in keeping with the CNO's vision to enable lifelong learning for Navy Sailors.

We noted in the previous section that almost half of all teenagers have reported visiting the site of a club or group of which they are a member. Increasingly, high-quality youth will come to expect an online experience from most of their organizations, and the Navy should not be an exception. To portray the image of a high-tech service, recruiting needs to keep pace with the technology that most youth have come to expect.

We turn now to a description of the components of the experimental Web site.

Components of the site

The Cyber DEP Web site was not designed to be as comprehensive as what we have described. It was intended to serve as a proof of concept, so we did not want to make major investments in a fully developed

prototype. We were able to incorporate the majority of themes, however, with minimal time and development costs.

Encouraging use

Before we outline the basic components of the site, we want to discuss an important feature of the Web site—its ability to draw people in and keep them coming back. In other words, we wanted a recruiter to be able to provide an incentive to a DEPer to log on, and we didn't want the site to remain stagnant so that a DEPer had no reason to return after the first experience.

To encourage the DEPer to log on, we were given permission by Navy recruiting to have PQS tests taken on the site count toward the total points required for promotion to E2. We included PQS study guide material that is available in the DEP Guide booklet (and at www.cnrc.navy.mil), plus graphics and descriptions of aircraft and ships, rank and insignia of all services, and educational opportunities. One component of the PQS tests that we could not include on the Web site requires a DEPer to demonstrate something physically, such as a salute.

To ensure that DEPers weren't taking the tests repeatedly without trying to learn the material first, we offered them three chances to take each test. If the DEPer failed to earn a score of 75 percent on the first attempt, they could take the test two more times, but the total points possible were reduced to 75 percent of the original amount.[8] However, for DEPers who were not able to earn the required 350 points to pass the entire PQS test, we provided the opportunity for them to earn extra points in a bonus test.

If a recruiter's time spent on DEP management is reduced by DEPers taking a majority of the PQS tests online, it is important to maximize the number of tests that a DEPer takes through the site. Thus, we attempted to establish an additional incentive. For various levels of points earned on the Web site, pieces of the Navy sweatsuit would be

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8. For instance, if the test was originally worth 100 points for all questions answered correctly, the second try would earn the DEPer only 75 points if all questions were answered correctly.

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awarded. This sweatsuit is a reward given to a small number of DEPers for various activities while in DEP. Unfortunately, legal advisers at Navy recruiting determined that awarding the sweatsuit for activities on the Web site would not be legal. We were not able to secure any other reward structure in time to begin the experiment.

We developed a few strategies to encourage DEPers to return to the site frequently to learn more and to become more indoctrinated to the Navy. Because of logistical complications of some of the schemes, we were not able to fully implement all of them, but we found fairly simple and low-cost substitutes.

First, Web sites that have forums with a large participation rate are constantly being updated. If dozens of messages are posted each day, there is ample new material for a DEPer to read every few days. To overcome "shyness" of being the first to post a message at the launch of the experiment, we populated the site with a few made-up questions and answers.

We also thought it would be interesting if DEPers could follow a ship or a squadron, or even a Sailor, each day to get a closer view of what life in the Navy is like. We envisioned something similar to what the Coast Guard has done in the past. The Coast Guard posted on its Web site the daily activities of a particular cutter, including where they steamed, ports of call, and even the menu. Such a report could be provided by a Public Affairs Officer (PAO) or even by a Sailor who would volunteer for the duty on a weekly basis. Although we were not able to provide this component of the Web site for the experiment, we did pull together material from historical *All Hands* magazines that focused on particular Sailors, and we posted these in a section on the site called "Meet the Fleet."

Finally, after all possible PQS questions were answered, we wanted to encourage DEPers to learn even more. Thus, we included a Question of the Week, which offered bonus points toward the PQS. The question could contain information concerning Navy history, ship or aircraft specifications, or even Army/Navy football scores that would pique the DEPer's interest but would require that he or she do some research (and learn something in the process).

Other site components

The other components of the Web site are as follows:

- A Recruiter-Only Forum that was only visible by those logging on with a recruiter account and password. We believed that the ability of recruiters to talk to each other nationwide was an important feature.

- A section called Contact Your Recruiter that allowed a DEPer to type in the ZIP code of his or her station to locate the cognizant station e-mail account. A DEPer could then e-mail his or her recruiter with information concerning a change in status (required of DEPers) or other communication.

- Links to Navy sites, such as Navy history and Navy.mil.

- Link to Navy Learning Web site. We had arranged with personnel associated with the Navy Learning Web site to allow DEPers in the experiment to access the site. However, delays in completing the Navy Learning site throughout most of the experiment prevented us from implementing this component.

- A feedback form, gathering demographic information about the respondent, plus opinions on the usefulness of the site.

- The New Recruit Survey (NRS). DEPers were awarded additional points for completing this.

- An ability to post biographical information about DEPers, such as hobbies, city and state, and even photos. DEPers could then search the database for other DEPers by geographic region, name, and so on.

Scope of experiment

When we first started the experiment, we anticipated that a 3-month controlled experiment would provide us with ample data to conduct rigorous statistical analyses. To get a reasonably good cross section of DEPers, while controlling for as many extraneous factors as possible that affect DEP attrition, we decided to include DEPers in the following three programs only: the Nuclear Field (NF), Mess Specialists

(MS), and Gendets. The Nuclear Field represents the highest quality recruits in the Navy, with the most stringent moral and physical requirements. In particular, all NF recruits must be true High School Diploma Graduates (HSDGs), with high scores on the Armed Forces Qualification Test (AFQT), and typically few receive accession waivers of any kind. This is a group that has traditionally had very low DEP attrition but might be expected to have the greatest knowledge of, and interest in, the Internet.

Like the Nuclear Field, Mess Specialists have a school guarantee, but they have some of the lowest AFQT and education requirements of any school guarantee program, as well as much lower enlistment incentives. Typically, those with a school guarantee have lower attrition than those without.

Finally, we chose Gendets because they do not have a school guarantee, and anyone who meets the basic eligibility requirements of the Navy can qualify to be a Gendet. We assumed that Gendets, like the Mess Specialists, would have less knowledge of, and interest in, the Internet than those in the NF.

By choosing this broad spectrum of DEPers, we sought to verify that the Web site was not only accessible to all types of recruits but also that it could benefit everyone, regardless of school guarantee, AFQT, and education. It became apparent after the experiment ran for a short time, however, that participation by those chosen was not going to be high enough to provide an adequate number of observations to conduct statistical analyses. At several points, we had to expand the experiment in terms of those included and/or the time period covered. A chronological account of the scope of the experiment follows:

- In late October 2000, CNRC Code 38 sent an e-mail message to all COs to inform them of the site and the experiment. Each CO was informed that they and their XOs had an account on the site, as well as each of their stations. The message provided login names and passwords, as well as names and account information of those DEPers chosen for the experiment. The latter included about 500 randomly selected NF, MS, and Gendet DEPers who were to ship between 1 November and 30 January.

- Each week, CNA sent an e-mail message to all stations with new contracts in the previous week that had been chosen for the experiment. The message included an attachment, an Excel spreadsheet, that noted the station number, the DEPer's name, and his or her login name and password.

- In the middle of January, in response to CNA's concern that an insufficient number of DEPers were using the site, Rear Admiral Voelker, Commander, Navy Recruiting Command, e-mailed all COs to notify them that the site had been opened to all DEPers, and that the experiment had been extended to include anyone shipping on or before 30 April. At the time of that message, only 123 DEPers had ever logged on, as well as just 166 of approximately 1,400 stations.

- Cyber DEP use did not increase appreciably following the admiral's message to the COs, so the message was sent again on 21 February by Code 35.

- CNA received valuable feedback on the site, from both DEPers and recruiters. Some of the feedback noted segments of the site that were difficult to use, or those that were particularly helpful. A large proportion of the discussions with recruiters, Recruiters in Charge (RINCs), zone supervisors, and Command Master Chiefs (CMCs) involved how they could best use the site to help monitor their DEPers' progress, and to determine who was logging on and who wasn't. Because we were receiving a number of inquiries, and because we also were learning about best practices as a result of these conversations, we decided to put together a Cyber DEP user's guide to illustrate the basics of the site and to show how DEP managers could use it to help monitor DEPers. The guide is included as appendix A to show what the site looked like as well as what it contained. This guide was forwarded to all Chief Recruiters (CRs) by Code 33 on 27 February.

- Cyber DEP was presented by Code 35 at the March CMC/CR conference at CNRC headquarters in Millington. The Cyber DEP guide was included as part of the presentation, and each CMC and CR received a copy. Also at that time, the CMCs and CRs were notified that they had accounts on the site.

- CNA and CNRC received a number of requests from the field to expand the scope of the experiment to include summer shippers, most of whom were high school seniors. Recruiters felt that this group would have much greater access to, and interest in, the Internet. Responding to that request, and because of concern that the site was still not receiving adequate use, CNRC decided to keep the Web site online through July and to open it up to anyone who was scheduled to ship before 30 August.[9] Code 35 sent a message to all COs, CMCs, and CRs on 29 March, notifying them of the expanded experiment.

- The Web site was turned off in the last week of July. CNA sent a message to every station notifying them of the completion of the experiment.
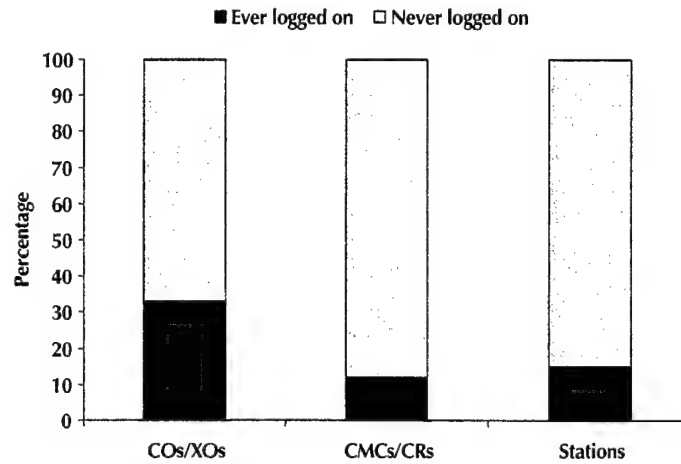
Findings

As the preceding chronology noted, CNRC requested field participation in the experiment on a number of occasions, and through a variety of command leadership positions. If recruiting personnel never logged on to the site, it seemed unlikely that they would pass the information concerning the site down the chain—either because they did not know that it existed or because they did not understand how it could serve their purposes. Ultimately, DEPers could only log on if they had been told about the site by their recruiter, who in turn would have had to learn about it from someone higher up in the chain, such as a CMC, CO, or XO.

Use

In figure 4, we present the use rate of the Web site by various groups, including NRD COs and XOs, Command Master Chiefs and Chief Recruiters, and stations. Only one out of three COs or XOs ever logged on to the site, and even fewer CMCs, CRs, and stations ever logged on.

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9. The message said 30 September, but, because of a miscommunication between CNA and CNRC, we were only adding DEPers who were scheduled to ship before 30 August.

Figure 4. Web site use by CNRC personnel

■ Ever logged on □ Never logged on

Even though the site had several components that could benefit Navy recruiting personnel in DEP management, the ultimate customer of the site was the DEPer. Therefore, we turn our attention to the use of the DEP site by this group.
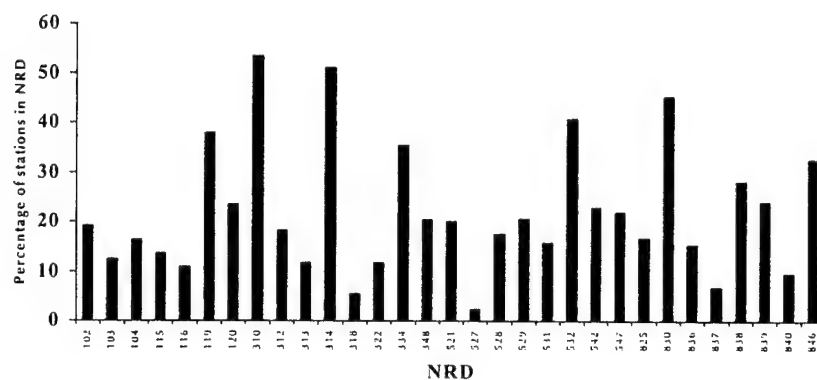
A total of 629 DEPers ever logged onto the site. Of these, 340 logged on more than once, and 246 took at least one test. The distribution of use is not uniform across the nation. Figure 5 shows the percentage of stations within an NRD that ever had a DEPer log on to the site. This percentage ranges from 2 percent (NRD 527) to 53 percent (NRD 310). Across the nation, only 332 stations, or 21 percent, ever had a DEPer log on to the site.

Why was use so low? There are a number of plausible explanations. Stations may not have been given the information, the Recruiter in Charge may not have passed the information along to individual recruiters, perhaps recruiters who were otherwise pressed for time did not want to invest the time to understand how the site works, or maybe recruiters who did look at the site decided it was not worth the additional effort to inform and train their DEPers.

Given the statistics that we cited previously concerning Internet access, we do not believe that a major deterrent was the lack of Internet access by DEPers. Recall that over one-third of all Americans who

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have ever been on the Internet have taken an online course, and 44 percent of online teens have used the Internet to visit the Web site of a team or activity to which they belong. Both of these activities were available on the Web site. So, a large proportion of DEPers who were informed of the site by their recruiter and were provided a basic description of what was available on the site would have been familiar with the functions of the site. We believe that such awareness and familiarity would translate into a reduced reluctance to log on. In other words, it seems doubtful that a large percentage of DEPers were informed of the site and either did not have online access or were reluctant to log on because they were unfamiliar with the basic functions of the site.

Figure 5.   Percentage of stations in NRD with any DEPer ever logging on

Recruiters, however, have fairly limited access to the Internet, particularly in the recruiting station. Limited access and/or unfamiliarity with the Internet may create a reluctance on their part to promote the use of the technology with their DEPers. In any event, it is beyond the scope of this study to evaluate the reasons why use was so low.
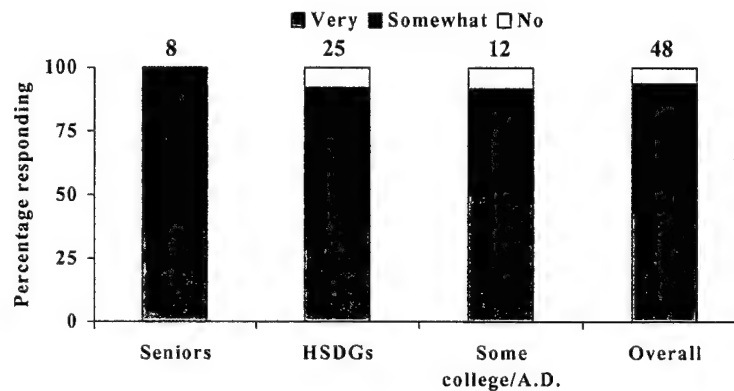
Feedback

An important part of the experiment was the feedback form. This form provided the best insight as to whether the site was useful to

those who accessed it and, if not, why not. The form asked for basic demographic information, as well as information on how and where the DEPer logged on to the Internet.

Figure 6 shows the response to the question "Has this site been useful to you?" The question allowed three possible responses: very, somewhat, and no. DEPers provided a total of 48 responses; recruiters provided an additional amount of feedback, which we have not included in this tally.

Figure 6. Feedback concerning usefulness of the site

We divided responses by education level, according to whether the respondent was a high school senior, high school degree graduate, had some college or an Associate degree, or other.[10]

Overall, over 93 percent responded that the site was somewhat or very useful. The percentage responding that the site was very useful is an increasing function of education level, with 50 percent of those with some college responding that the site was very useful. Although we realize that the number of respondents is very low, these 48 represent 14 percent of those who logged on to the site more than once.

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10. The number of respondents is noted above each stovepipe. The last category (other) had only 3 respondents, so we do not report their response separately, but they are included in the total.

We also found that the feedback form was a useful tool for DEPers to inform us of errors on the site, and for the field to submit inquiries about adding DEPers or advice on how to use the site.

New recruit survey

An extra 10 points toward the PQS were awarded to any DEPer who filled out the New Recruit Survey (NRS) online. CNRC wanted the NRS added to the Web site to see how effective online surveying could be on Cyber DEP. If online surveys were effective, this would allow CNRC to quickly and cost effectively survey DEPers on a variety of subjects, with questions changing depending on requirements. For instance, in response to the September 11th attacks, CNRC could have posted questions on a Cyber DEP Web site to determine whether those in DEP felt more or less inclined to obligate, to determine what kinds of issues or fears the events raised with DEPers and their families. Understanding quickly how an entire nation of DEPers and their parents felt about obligating under drastically changing circumstances would provide valuable information to all of the recruiting force. This information could then help CNRC develop appropriate responses, training materials, and the like, to allay any concerns or fears that the events may have caused and perhaps help to avoid future difficulties.

DEPers were allowed to fill out the NRS only one time, but we also allowed anyone, including recruiters, to fill out the survey. Of the more than 600 DEPers who ever used the site, 151 filled out the NRS. This represents a 24-percent response rate.

Analysis of experiment

Our analysis focuses on determining whether the Cyber DEP Web site had any effect on DEP attrition.[11] Although it would be interesting to

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11. Our original intent was to also analyze the effect of the Web site on boot camp attrition. Because of complications with the data, we are confining our analysis to DEP attrition. In particular, none of the 36 NF DEPers who used the site, and shipped to boot camp, attrited from boot camp. Without some variation in the characteristics of those who used the Web site, particularly in terms of the dependent variable (boot camp attrition in this case), we cannot use multivariate techniques.

know whether the Web site was effective in reducing the time recruiters had to spend in DEP management or whether the Web site reduced boot camp attrition or academic setbacks of recruits in boot camp, it is beyond the scope of this study to examine these issues.

We turn first to a definition of our sample.

Control and experimental group

To isolate the effects of the Web site on attrition, our original experimental design intended to control for as much variation in recruit characteristics as possible. That is why we chose just three ratings and a short period of time to conduct the experiment. Even though we expanded the experiment twice, to include more ratings and more months, we have chosen to conduct our analysis on three narrowly defined groups: NF,[12] 4-year obligors (4YOs) with a School Guarantee (SG) (most Mess Specialists are in this group),[13] and Gendets.[14]

This restriction allows us to eliminate many unmeasurable effects that have an impact on attrition. In particular, we want to be able to differentiate the effect of the Cyber DEP Web site from any characteristic of the recruit that may be a measure of motivation. If DEPers who used the site tended to be the most motivated people regardless of the site, failure to control for their motivation will cause the estimated effects of the Web site to be biased toward the conclusion that it was beneficial. Because many factors relating to motivation are correlated with the choice of program (such as length of obligation, bonus levels, and screening requirements), we can reduce the influence of these factors by looking at just these programs that have fairly homogeneous recruits within, but not across, each rating.

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12. Because of the uniqueness of the enlistment incentive, we have eliminated NF recruits who were in the Navy College Assistance/Student Headstart (CASH) program.

13. To eliminate the confounding effects of enlistment incentives and the longer obligations they sometimes require, we include only those 4YOs who accepted neither an enlistment bonus nor the Navy College Fund.

14. Non-prior-service recruits only.

Our definition of the sample is complicated by the three phases of the experiment. Here's how we defined our sample:

- From late October through the middle of January, all NF, MS, and Gendet DEPers whose current enlistment date was between November 1 and January 31 were randomly assigned as belonging to either the control or experimental group. Anyone who actually logged on to the site is defined as being part of the experiment; all others, regardless of whether they were originally chosen to be in the experimental or control group, are in the control group.

- From mid-January through the end of March, any NF, 4YO SG, or Gendet recruit who had a current enlistment date between 30 January and 30 April was given an account on the site. Only those who accessed the site are considered to have participated in the experiment.

- From the end of March through late July, any NF, 4YO SG, or Gendet recruit who had a current enlistment date between 30 April and 30 August was given an account. We define experiment participants in the same way.

To further control for extraneous factors, we only include DEPers who ultimately shipped in one of the three programs,[15] or whose program at the time of attrition was one of these three.

Finally, to control for recruiter motivation, we confine observations for the control group to DEPers who came from stations that ever had any DEPer log on. We do this for two reasons. First, only DEPers who were informed of the site had the opportunity to log on. If recruiters who told their DEPers to log on are somehow different in their own motivation and ability to motivate their DEPer to obligate, and that is why they encouraged their DEPers to log on, we can control for this factor somewhat by confining our sample to these stations. Second, if Internet use is correlated with geographic area, which in turn is a proxy for

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15. We exclude those who may have been in one of these three programs during the experiment but who did not ship as an NF, 4YO SG, or Gendet. We do this to further control for extraneous factors that are correlated with a DEPer's change in program.

variables that are correlated with DEP attrition (e.g., unemployment, socioeconomic conditions, propensity), confining our sample helps to reduce the confounding effect that these factors would have on the estimated effect of Cyber DEP.

We define three different levels of Web site participation:

- Anyone who ever logged on
- Anyone who logged on more than once
- Anyone who took a test on the site.

The first definition presents some complications. We are aware that some recruiters logged on to the site using their DEPer's account because they did not know their station password. We cannot identify which DEPers this includes, but we know that this happened a number of times, particularly when we were helping a recruiter to learn how to use the site. Conversely, we know that some DEPers logged on to the site using the station account because they had not been chosen for inclusion in the experiment (mainly because they were shipping later than our cutoff dates). Thus, we cannot be sure that each DEPer who logged on just one time actually used the site, so we have not included every DEPer who ever logged on.

Our second definition of use is intended to eliminate as many of these errors as possible, assuming that recruiters who used their DEPer's account did so perhaps just one time in order to see what the site looked like. We also believe that this definition is more correlated with the usefulness of the Web site because those who visited the site more than once might do so because they found it more useful than those who logged on only once.

Our third definition of use is another measure of the intensity of the use of the Web site. To take a test on the site, the DEPer most likely had to read some of the material in the PQS section. Taking a test is much more proactive than simply logging on and clicking on a few sections and perhaps reading the material.

These are not mutually exclusive categories, and they may or may not imply increasing intensity of Web site use. In other words, everyone

who is in the category of logged on more than once is, by definition, in the category of ever logged on. However, those who took a test may have taken it the only time they logged on. Likewise, those who logged on numerous times may never have taken a test. However, one could argue that intensity of use of the Web site is related to the number of times one logged on, and perhaps to the proactive step of taking a test.

Definition of DEP attrition

Unlike the traditional definition of attrition from the Navy, which has a particular event and date associated with it, defining DEP attrition is not straightforward. For instance, a DEPer may fail to ship on the date stated in his or her original contract for a variety of reasons, such as a temporary or short-term medical condition that must be corrected (e.g., a bad flu), failure to graduate from high school on time with subsequent summer school requirements for graduation, or even a change in desire to join the Navy (which may be turned around once again at a later date).

Conducting a complete analysis of the various types of DEP attrition is beyond the scope of this study. Given the time frame of the study—particularly the fact that it did not span an entire year, so we cannot capture all seasonal differences—we have chosen to focus on just one type of DEP attrition, with narrow parameters. For the purpose of analyzing the effect of the Cyber DEP site on DEP attrition, we define a person to be a DEP attrite if he or she was originally chosen to participate in either the experiment or control group[16] and has a DEP attrition code on PRIDE. Those who are still in DEP, by necessity, must have changed their ship date, and have been excluded from the sample. This represents just four people in the experimental group.

Using the parameters just described to define the experiment and control groups, we have 296 DEPers who ever logged on, 149 who logged on more than once, and 117 who took a test. The control groups who did not use the site consist of about 5,000 DEPers.

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16. This would mean that the ship date at the time he or she was chosen was no later than 30 August.

Estimation

Factors that affect DEP attrition can be summarized as pertaining to recruit personal characteristics, enlistment characteristics, or outside influences (such as unemployment). Table 2 lists the independent variables that we have included in our analysis.

Table 2.   Independent variables

Variable
Personal characteristics
Gender
Education
AFQT
Citizenship
Race
Age
Service characteristics
Program of entry
Waiver
DEP more than 30 days
Shipped before original ship date
Shipped later than original ship date
Geographic area
Enlistment month
Cyber DEP participation by program of entry

Personal characteristics

Several studies [13, 14, 15] have consistently found that males, African Americans, younger recruits, and those with higher AFQT scores experience lower DEP attrition. In addition, because of their lower economic opportunities relative to citizens, we expect non-citizens to have lower DEP attrition.

Service characteristics

Nuclear field recruits have the lowest DEP attrition of any other group, holding other factors constant, even though they have a longer obligated service and long training pipeline.

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Recruits with a school guarantee typically have lower attrition than do Gendets, holding all else constant. However, we have chosen recruits with just a 4-year obligation, which typically means that they have a relatively short training pipeline. Also, because we have confined this group to include only those who did not accept an enlistment incentive, there may be little or no difference in the attrition of this group relative to Gendets, holding all else constant.

PRIDE records several categories of accession waivers. One study found that those with a minor misdemeanor waiver actually have lower boot camp attrition than recruits who enter with no waiver [16]. In general, however, we would predict that those with waivers have higher DEP attrition. We included broad categories in our analysis: law violation, drug, dependents, medical/physical, program provisional, minimum education, and other.

As noted previously, increasing time in DEP is associated with higher DEP attrition. We use a cutoff of 30 days or less to differentiate those with a relatively short time in DEP.

A large number of DEPers change their enlistment date during their time in DEP. On one hand, some DEPers may move their date up and ship almost immediately after the change. It seems fairly likely that these DEPers will not attrite from DEP. On the other hand, DEPers who keep putting off their ship date may be having second thoughts and be less motivated than other DEPers. To control for these factors, we included a variable that indicates whether the person's last current enlistment date was more than 1 week earlier than the original ship date, or more than 7 days after.

Geographic area

We include geographic area to further control for regional differences that have an impact on attrition, such as the unemployment rate, college enrollment rate, general Internet use, and other socioeconomic factors outside the Navy's purview, as well as those within, such as area-wide recruiting policies and management.

Enlistment month

Month of enlistment affects attrition for a number of reasons. During the winter months, particularly if the weather is extremely cold or snowy, DEPers may be less willing to obligate (recall that the Navy's only boot camp is in Great Lakes, Illinois). Also, the time of the year is related to other types of recruit characteristics. For instance, non-high-school-diploma graduates (NHSDGs) who ship in October may have a higher level of motivation and commitment than NHSDGs who ship during other months of the year. The Navy usually meets its cap on NHSDG accessions fairly early in the year, so that NHSDG recruits who are interested in joining in the summer months may have to wait for the new fiscal year to begin. Only those with the highest level of motivation will typically wait that long.
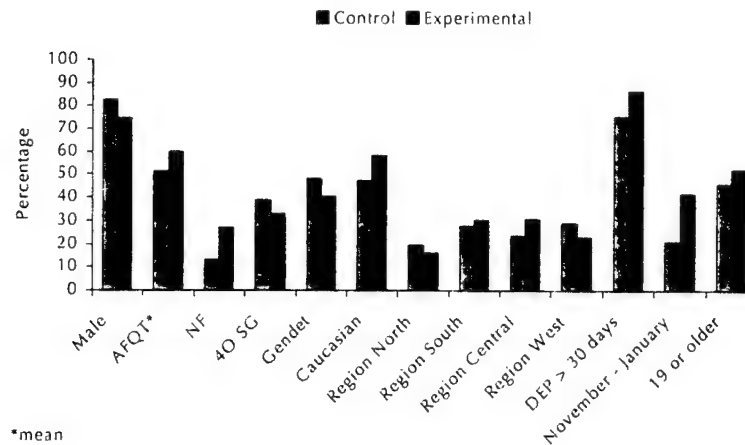
Experiment participation

As we described previously, we have defined three levels of Cyber DEP participation. We estimate three separate equations for DEP attrition, one for each level of participation: ever logged on, logged on more than once, and took a test. Within each equation, we differentiate the effect of the Web site on attrition by program of entry. This allows the estimates of the effect of the Web site to vary with different categories of DEPers.[17]

Appendix B contains summary statistics of the variables used in the analysis. Figure 7 shows some of the largest differences in the characteristics of the control and experimental groups, by whether they logged on more than once. In general, those who used the Web site had a higher AFQT, were more likely to be in the Nuclear Field, be Caucasian, be older than 19, and have more days in DEP. There also tended to be a slightly higher use of the site by females. Also, more of the experimental DEPers shipped between November and January, and Region North had the lowest participation.

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17. The three variables indicate whether the DEPer was an NF and used the site, 4YO SG and used the site, or a Gendet and used the site.

Figure 7. Percentage with certain characteristics for those who ever logged on more than once versus the control group

*mean

To see what differences exist in Web site use and attrition by program, we provide summary statistics of the various levels of use and overall DEP attrition, by program of entry, in table 3. As we expected, the Nuclear Field DEPers had the highest rate of use and the lowest overall DEP attrition.

Table 3.   Summary statistics by program of entry

	Percentage participating in experiment			
	Ever logged on	Logged on more than once	Took a test	Overall attrition
Nuclear field	11.6	5.7	5.8	14.0
4YO school guarantee	5.0	2.4	1.6	19.2
Gendets	4.4	2.4	1.7	18.2

We are interested in the probability that an individual will attrite, which is measured as a dichotomous variable (yes or no). Because of the bias inherent in using ordinary least squares estimates on this type of dependent variable, we use the probit probability model.

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Results

Appendix C contains results of the probit estimation. This was intended not as a definitive study of DEP attrition but as an attempt to isolate the effect of the Web site on attrition. We caution against extrapolating these results to all DEP attrition. In particular, we have narrowed our analysis to a select number of ratings, 10 months, and a few stations. The goal was to control for as many extraneous factors as possible to estimate the effects of Cyber DEP.

The results indicate that the site had a significant impact on reducing DEP attrition for all three categories of recruits, and that in most cases, the more intensive the participation, the greater the reduction in attrition. The estimated effect is large and statistically significant for all levels of use for recruits in the Nuclear Field, for 4YO SGs who ever logged on or who logged on more than once, and for Gendets who ever took a test. While the remaining Cyber DEP coefficients are also relatively large, they are not statistically significant.[18]

To ensure, as much as possible, that these coefficients are isolating the effect of the Web site, we conducted several tests. In particular, we wanted to determine whether the Cyber DEP variables were highly correlated with other measures of DEPer and/or recruiter motivation. If they are correlated, it is difficult to determine whether the coefficients are measuring the effect of the Web site, the motivation of the DEPer or recruiter, or some combination of the two.

One test included a collinearity diagnostic tool available in SAS using multiple regression.[19] It concluded that the Cyber DEP variables were

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18. Given the significance of a majority of the coefficients, we believe that the lack of significance in these few coefficients results from the low number of participants in the experiment. In particular, the standard error of these estimates is large relative to the size of the coefficient. These errors are usually reduced with more data.

19. Although multiple regression is not appropriate as an estimation tool for a dichotomous dependent variable, the diagnostic is appropriate because it simply checks for collinearity among the independent variables. It estimates eigenvalues, condition indices, and decomposition of the variances of the estimates with respect to each eigenvalue.

not correlated with other variables. Further, we estimated probits without the early ship and late ship variables to see if the coefficients on Cyber DEP changed significantly. We felt that these were probably two of the strongest variables associated with DEPer motivation. If the Cyber DEP variables were also simply measuring motivation, the removal of these variables would have led to a significant change in the Cyber DEP coefficients, which it did not.

Finally, to control for recruiter motivation, we estimated the same probit equations as in appendix C, but included all stations, regardless of whether a DEPer ever logged on. Again, if the Cyber DEP variable was measuring recruiter motivation, increasing the sample to include even those stations without someone logging on should change the variables significantly. Again, it did not. Therefore, we feel that we have adequately controlled for both recruit and recruiter motivation.
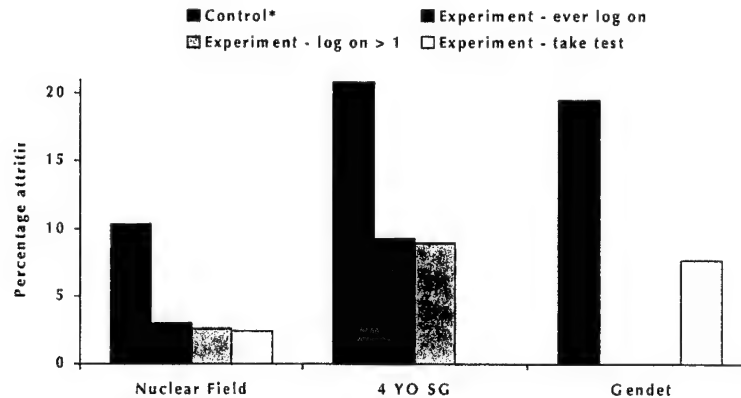
Using the estimates in appendix C, we predict the probability of DEP attrition for otherwise similar individuals who differ only in their participation in the experiment.[20] We confine these estimates to those conditions in which the Web site had a statistically significant impact on attrition. Figure 8 shows these estimates.[21]

The predicted differences in attrition are quite large, with the greatest difference between those who ever took a test. For instance, the predicted reduction in attrition is 77 percent for Nuclear Field DEPers who ever took a test, 61 percent for Gendets who took a test, and 57 percent for 4YO SGs who logged on more than once.

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20. We estimate the probability for a male, HSDG, citizen, Caucasian, older than 19, from Region North, shipping in January, with more than 31 days in DEP. For each program, we use their mean AFQT. For NF, 4YO SG, and Gendets, these are 88.3, 51.9, and 41.8, respectively.

21. The predicted attrition for the control group differs from that of the overall mean because of the values for the representative DEPer. For example, we have chosen a January ship date, but only 10 percent of the control group shipped that month.

Figure 8.   Predicted DEP attrition

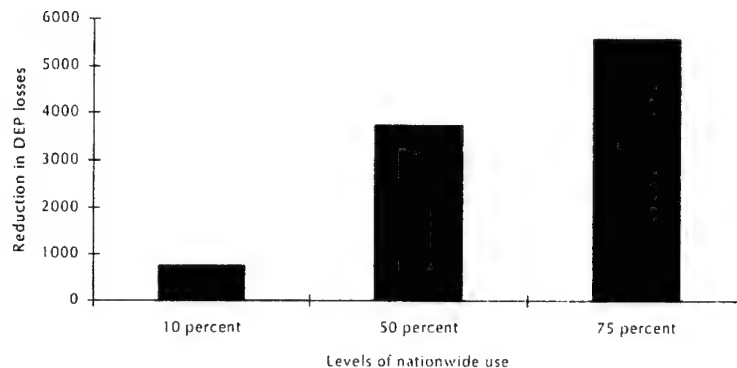*Control group is defined as those who did not log on more than once

What does this mean in terms of an overall reduction in DEP attrition? In FY01, there were 64,626 DEPers,[22] of which 13,183, or 20.4 percent, attrited before going on active duty. Extrapolating the predicted reduction in attrition for 4YO SGs who logged on more than once to all of Navy DEP (this is the "median" group of the three, and probably the most representative of the average Navy DEPer), a comparable reduction in attrition across the board would have meant a DEP attrition rate of 8.8 percent[23]—if all DEPers logged on to the site more than once. Certainly, it is not reasonable to expect that all DEPers could or would use the Web site, even if they had access to the Internet. In figure 9, therefore, we provide a range of predicted reductions in DEP attrition using various hypothetical nationwide Web site use rates, based on estimates for 4YO SGs who logged on more than once. For instance, if only 10 percent of all DEPers ever logged on more than once, we predict that there would have been 745 fewer DEP attrites in FY01. If, as seems more reasonable given nationwide Internet use trends cited earlier, at least half of all DEPers

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22. We are defining DEPers as those who either shipped or attrited in FY01.

23. Our estimates predict a 57-percent reduction in attrition for those who logged on more than once. A 57-percent reduction in the 20.4-percent attrition in FY01 is 8.8 percent.

used the Web site, we predict a reduction in DEP attrition of 3,727. The predictions are even greater for 75-percent nationwide use.

Figure 9.   Estimated reduction in attrition with various levels of nationwide use

What do the reductions in attrition translate to in terms of benefits? Various levels of benefits may accrue besides those that come directly from recruiting and training. For instance, as we noted previously, an Internet-based DEP site has the potential to save recruiters' time, to reduce academic attrition, and even to reduce the time to train if DEPers start their training while still in DEP. For simplicity, we will estimate recruiting benefits alone.

Lower DEP attrition could result in a reduction in the costs of various components of recruiting, such as advertising, enlistment incentives, and other recruiting support. We will focus on the most expensive category of recruiting—recruiter pay—which accounts for about half of the total cost to recruit. Currently the 5,000-strong recruiting force is the largest in the Navy's history, and with it, the largest proportion of endstrength ever devoted to recruiting. Assuming constant productivity, a reduction in DEP attrition would mean that fewer recruiters would be required to accomplish the same accession goal, making more Sailors available for duty elsewhere in the Navy. Thus, we measure the benefit of lower DEP attrition in terms of the savings in Navy manpower.

Table 4 contains our estimate of savings in recruiter compensation for the various predicted reductions in DEP attrition contained in figure 9. These savings are based on the following assumptions:

- The average recruiter produces 14 contracts per year (with a Production Per Recruiter of close to 1, and 18 percent DEP attrition).

- Each recruiter costs about $45,000 in compensation each year. This figure is a weighted average of COMET rates for paygrades E3 through E9, in FY00 dollars [9].

As a reminder, we are including only the cost of recruiter compensation for simplicity, but certainly there would be significant savings in marketing, advertising, and other support.

Table 4. Estimated savings in recruiter compensation from a reduction in DEP attrition

Percentage using Web site	Savings ($M)
10 percent	2.4
50 percent	12.0
75 percent	18.0

Our savings estimates range from $2.4 million for just a 10-percent nationwide use, to $18.0 million for 75-percent nationwide use. These estimates are not actual dollars saved by the Navy. Instead, they represent improved efficiency of recruiting, and we are using compensation as a measure of the value of this increased efficiency.

Our purpose in providing these estimates is to give an order of magnitude to the potential benefits that could accrue if Navy recruiting developed and maintained a Cyber DEP Web site, trained recruiters on its use, and promoted use of the site by DEPers. It seems reasonable that a yearly investment of up to $1 million to maintain a site, given the rather conservative estimates in table 4, would be cost-effective to the Navy. From our experience, the development and maintenance of such a Web site could cost far less than even $0.5 million.

It is not enough, however, for CNRC to develop the Web site. As we documented here, even with the experimental Web site and promotion by the Commander of Navy Recruiting, less than one-third of all COs ever logged on, and even fewer stations. Adoption of this technology would require training of recruiters and other personnel and, probably more difficult, a change in Navy culture. Recruiters who have been on recruiting duty for 10 years will find it difficult to adopt a new technique, and any recruiter who is not comfortable with the Internet will be reluctant to expose that lack of technical expertise to his or her DEPers. Part of the difficulty comes from the fact that not all recruiters have ready access to the Internet at their desks. But we contend that it is difficult for the Navy to portray itself as a high-tech service, which the market Web site does, and leave recruiters using 20th-century recruiting tools.
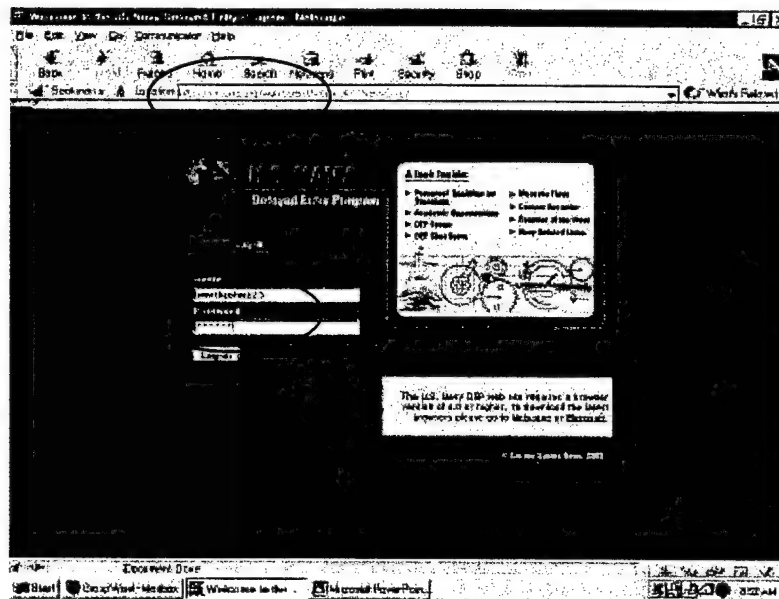
Recommendations

Based on our research on Internet accessibility, use by teenagers and young adults, and our own experimental results, we strongly urge Navy recruiting to design and maintain a Cyber DEP Web site that contains at least the functions that were included in the experiment. Equally important, recruiters need to be trained on the functions of the site and need to learn how it can benefit them.

To ensure participation by as many DEPers as possible, personnel in Navy recruiting headquarters could monitor the use rate of recruiters by NRD, providing reports to the Admiral and the NRD COs on a monthly basis (describing use rates, intensity of use, etc.). Goals could be set for each NRD of, say, 10 percent of all DEPers using the Web site each month, with a gradual increase to 50 percent within a year. For stations that are in isolated rural areas where access to libraries and even home Internet use is low, a Cyber DEP-dedicated computer could be set up in each station for exclusive use by DEPers.

Such investments will likely be cost-effective to the Navy, as we have illustrated. And high-quality youth will increasingly demand such high-tech methods of learning and communicating. As the ERNT report stated, "The revolution is inevitable; it is underway outside the Navy; we must harness it, focus it, and bend it to the Navy's needs."
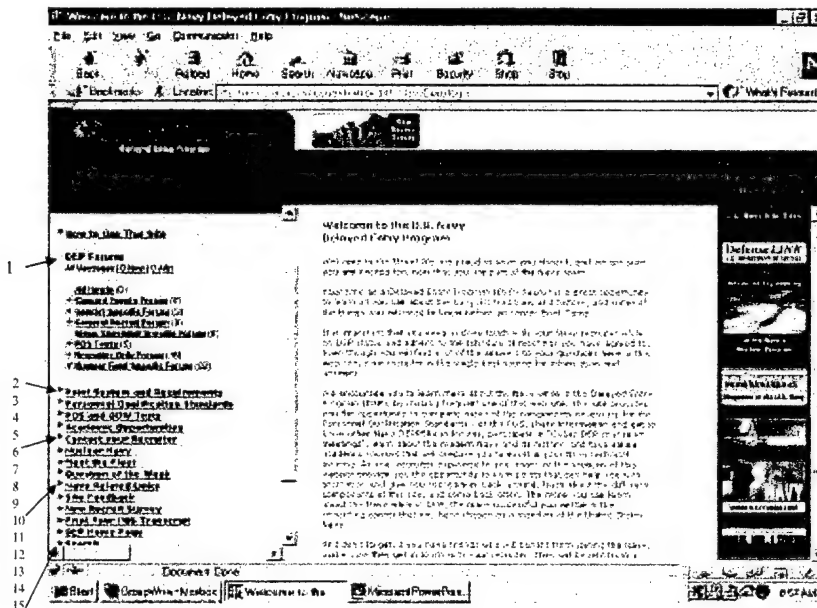
Appendix A: Guide to Cyber DEP

This is the initial login screen. If you don't see this, then you may not be typing in the right address. Remember - we are not a www server address. Just type in nrp.cna.org in your browser. The rest of the address comes up automatically when you hit return.

For recruiters: Your login name is your station number. Your password was provided to you in an excel spreadsheet by your CO. These are randomly generated 6 digit numbers. You should probably change the password to something you can remember (we will show how later). Also, this is a station-wide account, and should be accessible to all recruiters. Please do not give the account to DEPers, since you have more privileges than they do.

For DEPers: Their login name is last name/first name/last 3 digits of station, as illustrated. Their password is the station ID. If your DEPer

follows this exactly and still can't log in, suggest that they use the first initial of their first name only, instead of their entire first name. We are pulling names and other information off of PRIDE each day, and for some DEPers, PRIDE only has the first initial of their first name. If this doesn't work, we will explain later how you can see if the DEPer even has an account on the site.

Forums: We have established numerous categories of forums. In essence, they are e-mail messages that everyone - DEPers and recruiters - can read from and write to. We will show you how later. The only exception to this is the Recruiter Only Forum, that will never show up in a DEPer's screen. Therefore, you can feel free to discuss recruiting issues, give points or tips to your colleagues, etc., without concern that your DEPers can see what you have said. Of course, if you accidentally give a DEPer your station account, then this is no longer true.

Point System and Requirements: Describes how points are earned, what is required, penalties for failing a test, etc.

PQS: This contains not only the material covered in the DEP handbook, but also material on ships and aircraft, educational opportunities, rank and insignia of all of the military branches. A DEPer can also get to the section tests in this part of the site.

PQS and QOW: QOW stands for Question of the Week - a brain teaser or trivia question that changes every Friday. DEPers can earn an additional 10 points each week for answering this question (and the

answers can often be researched on the site). This link sends you directly to all of the tests.

Academic Opportunities. The Navy Learning Network will soon be launched Navy wide, and this provides a link to that site. Since only those in DEERS can use the site, we have made special arrangements with NLN to add the names of DEPers with accounts on this site to also have access to NLN.

Contact your recruiter: For DEPers without e-mail, this allows them to e-mail you via the website to inform you of any change in their eligibility for enlistment, medical appointments, etc. They simply have to know the zip code of the station, and a lookup program sends the message to the station e-mail account.

Nuclear Navy: We had originally intended to test the site with NF DEPers only, hence the section on the Nuclear Navy. This material is taken from Showcase.

Meet the Fleet: In our original discussions for the site, we thought it would be a good idea to keep the site changing as often as possible, to make DEPers want to keep coming back often to find new information. In the Meet the Fleet section, we had hoped to post a daily summary of the activities of a ship, a Sailor, a squadron - etc. - provided by the cognizant PAO. Or, we could establish a link with a particular Sailor volunteer who agreed to look at forum questions targeted directly at him/her (such as "What's it like to be a [fill in the rating]? What did you do today? What do you do on shore duty?")—perhaps for a one-week period, with a new Sailor chosen each week. This takes a lot of work and coordination with other commands. So, we opted to simply post what we could find on Navy life for the duration of the experiment. Most are articles taken from All Hands, but there's also a virtual tour of a submarine (from the NOVA site), and other non-Navy-site material.

Question of the Week: Just another hyperlink to the PQS tests, where QOW is posted.

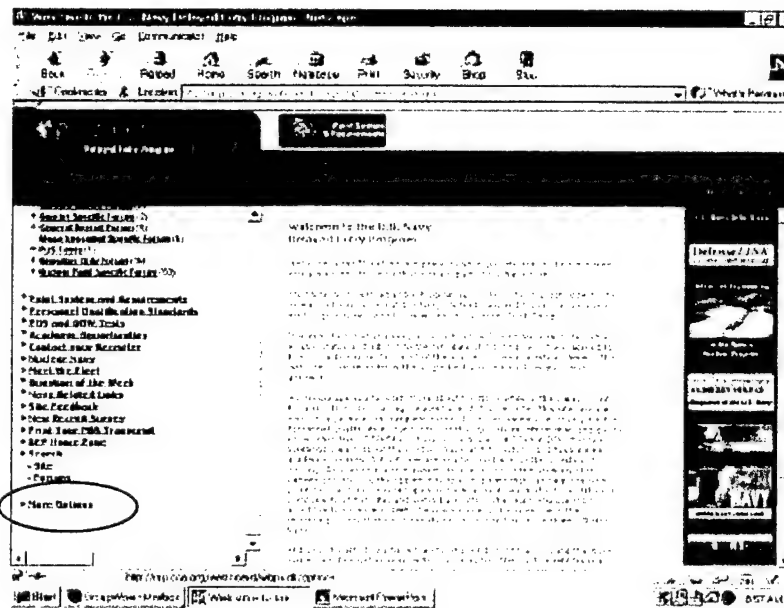Navy Related Links: Hyperlinks to all types of Navy sites

Site Feedback: We have a feedback form that is sent directly to an e-mail account at CNA for review. It is a totally private form - it is not shared with anyone. Some people may choose to provide feedback here, but we suggest giving feedback in the forums so others can hear what you have to think, weigh in, etc. Recruiters may want to post to the recruiter only forum for their feedback, out of view of DEPers.

New Recruit Survey: This is the standard NRS given at MEPS periodically. We want to see how possible it is to administer surveys on this site. DEPers earn 10 points just for filling this out (which you should then add to their total points when determining if they have passed the PQS - more on that later).
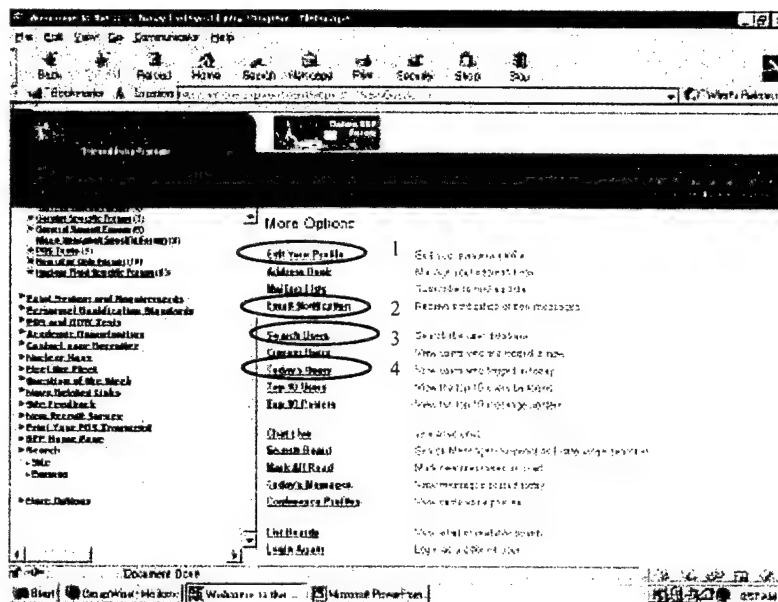
Print your PQS Transcript: Recruits can click here and a summary of all the tests they have taken and total points earned will be displayed. They can then hit their browser's print button to have it printed for their file, providing documentation of completion of partial requirements for E2.

DEP Home Page: A hyperlink to get you back to the welcome page.

Search: You can search the forums or the site for information on particular topics. This is especially helpful when trying to do research to answer a PQS question.

More Options is where you will be able to go to manage your DEPers on this site. Details are on the next slide.
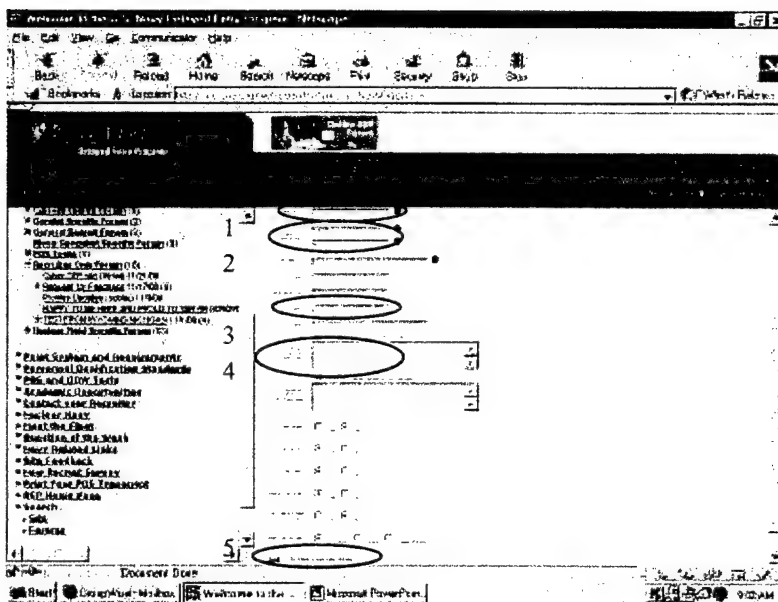
Edit Your Profile: Here's where you can change your password, add information about yourself, set preferences. More on the next slide.

E-mail notification: We recommend that you click here and subscribe for e-mail notification of all forums. What this does is send an e-mail message to your station e-mail account telling you that a message was posted to the forums, which forum, and what the message was. It's important that all recruiters participate in answering DEPers questions in a timely manner, and that they ensure that messages that are posted are appropriate and do not contain false information. Even if you don't log on to the site every day, you at least will know what is being posted via this notification. Other than a weekly change in the QOW, forums are currently the only part of the site that doesn't remain the same all the time. DEPers will want to keep coming back to see what is being said and to ask questions if they know that the questions are answered in a reasonable amount of time and address their concerns. Perhaps one of the greatest benefits of this site is the ability of DEPers to ask questions 24/7 and not have to have a recruiter answer the same question numerous times. Any DEPer having the same question as one posted will be interested in the

answer, and won't have to play phone tag with you trying to get the answer. Here's an example: Let's say that every recruiter spends an average of 5 minutes each day, either on the phone or in person, answering fairly common questions (like can I take xyz to boot camp?). Let's say that these questions are instead posted one time each on the site by DEPers, and that all DEPers read the answer. The sum total of time saved for each recruiter each year is almost 22 hours (assuming a 5 day week, 52 week year)!

Search Users: The best tool you have for keeping track of your DEP pool. More later.

Today's Users/Current Users: If you want to see if your DEPer has logged on today (or is currently online), click here. It will show you everyone who has logged on to the site that day - or is still on. If a NEW sign is next to their name, that means that they are not logged on, but have just had an account added to the site that day.

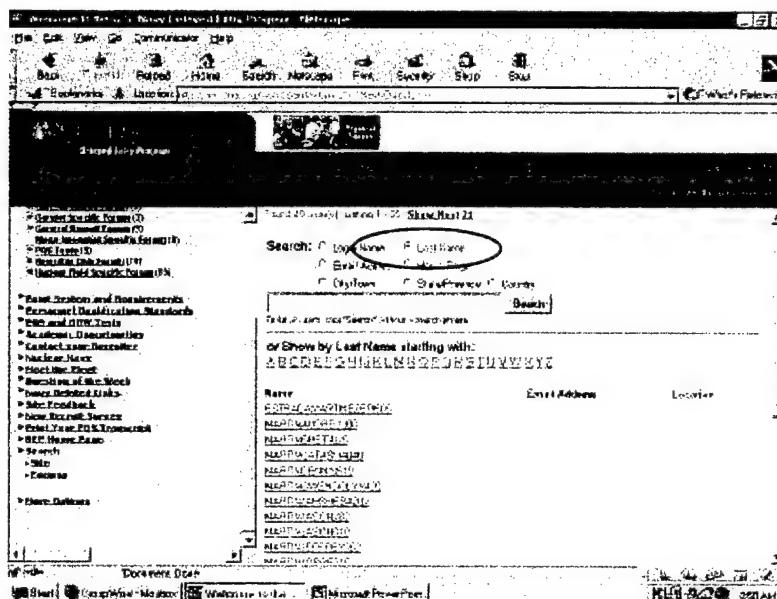This is what you see when you click on Edit Your Profile under More Options:

Last name: DEPers can change neither their first nor their last name (to ensure that you can search on their name and find them!). They can, however, change their login name and password - as can recruiters. However, we request that stations not change their login name (which is the station ID) - but please feel free to change the password. By keeping the station number as the login name, you are easily identifiable as a station and not a DEPer, or other CNRC personnel.

Password needs to be entered twice for verification.

Country: Currently, this field is not filled in by CNA when they enter new accounts. We only put in name and password information. We suggest, to make it easy for you to find all of your DEPers, that you require them to fill in the country field with the station ID (or perhaps the name of the NRD and station number - whatever works best for you). As we show in the next slide, this will allow you to search for all of your DEPers by NRD or station, by searching on country.

Hobbies, etc.: If you want people to know a little about you, this is where to put that information. Every time they click on your name (say, under current users), that information will be displayed.

Save: Whenever you make a change to your profile, you must click save, or else the information will not be saved.
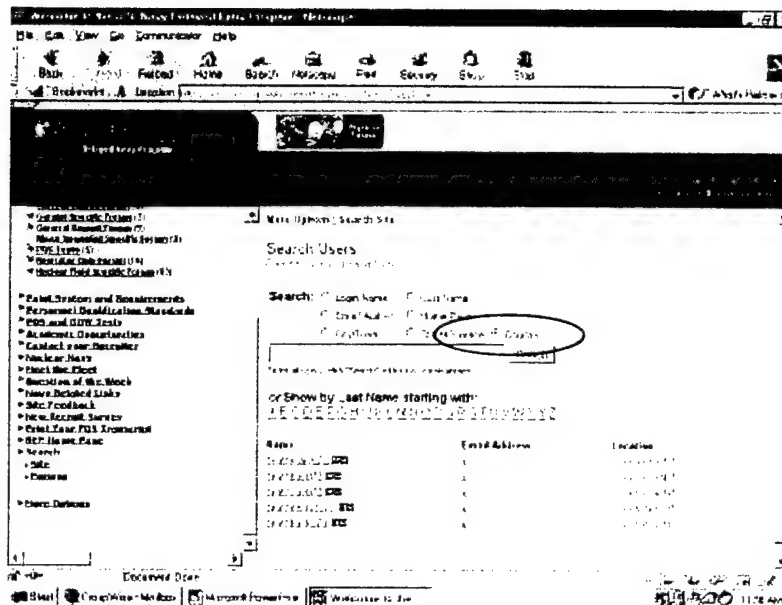
Here's how to find out if your DEPer has an account on the site, what his/her transcript looks like, whether he/she is using the site, etc.

Under More Options, click search users. This screen will come up.

To find out if your DEPer has an account on the site: Click on last name (circled above), and type in just the last name - not first name too. This screen shows the results of typing in mart (looking for martin - but will show anyone with the letters mart in their login name - first or last name). Scroll down until you find one that has the last three digits of your station. Click on the hyperlinked name, and you will be able to see the station ID associated with that DEPer. If you can't find them (and remember, they have to ship before 01 May), you need to contact CNRC.

The reason you should not search by last name/first name is that PRIDE doesn't always provide full first name. By searching on full first name, you may miss the DEPer when they actually have an account.
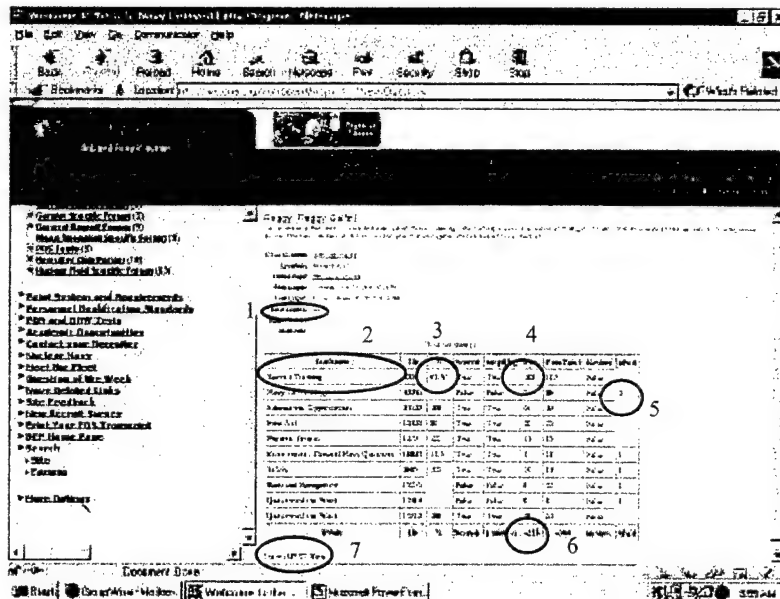
To search for all of your DEPers, search on the country field. If you required everyone to put in the NRD name and either the station ID or zone number, etc., then you can use this feature to easily find your DEPers. We illustrate here how this works.

If you are the DEP coordinator for all of Richmond, you may want to see the records of all of your DEPers. In that case, you would type just richmond in the search field (after clicking on country). This illustrates all of the DEPers with the word Richmond in all or part of the country field.

Say instead you are the RINC of station 070 in Richmond. Then, you would type in richmond070 in the search field. In that case, only those who have that combination in all or part of the country field will show up - in this case just Mary, Bob and Sue.

On the next slide, we illustrate what you see when you click on the hyperlinked name of the recruit.

Here's what you see when you click on your DEPer's name:

You can see how often your DEPer has logged on to the site, or if he/she has never been on. If the space after Total Logins is blank, then he/she has never logged on. Right above this, you can also see the last time he/she logged on. First login is simply the date the DEPer was given an account on the site.

This entire section is their PQS transcript. Recruits cannot see the transcript of other users - only their own. Recruiters can view anyone's transcript. The first column is the name of the section test.
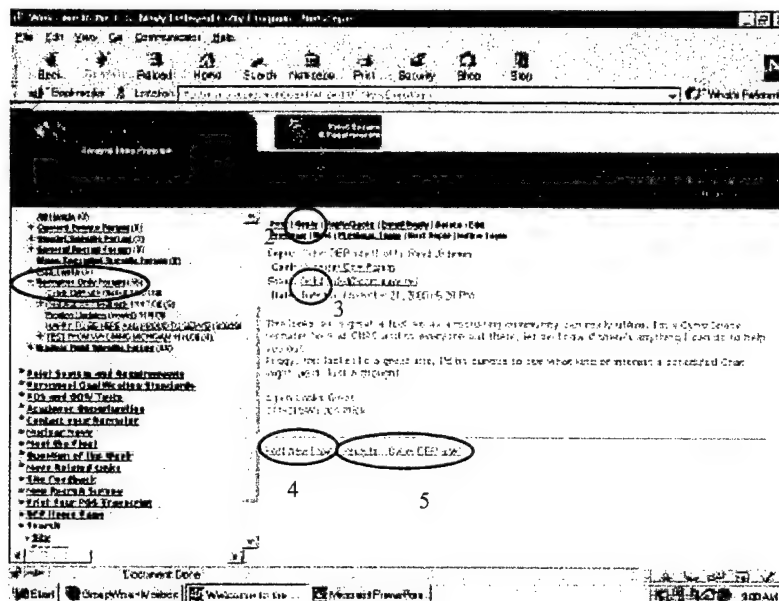
This indicates what percentage of points were earned by the DEPer on that part of the test - 92.3%, in this case.

This column tells you how many points were earned by the DEPer for that test. In this case, 108 points out of a possible 117 (which equals 92.3%). Each test except extra credit requires a passing grade of 75% or greater to earn any points. A score below this is awarded no points.

This indicates whether the DEPer has ever failed the test. In this case, the test was failed twice. This helps you to know where your DEPer's weaknesses are, and areas you may want to work on further.

This is total points earned for PQS tests so far. Add to that 10 points if the DEPer took the New Recruit Survey, indicated in: "Taken NRS?"

This tells you if the DEPer took the NRS.

Here's a little explanation about the forums:

To see what has been posted on a particular forum topic, click on the subject of that forum - Recruiter Only Forum, in this case. If there is a + sign in front of it, it means there are topics underneath that are hidden. When you click, the + will change to a - and all the topics posted to that forum will be listed - such as Cyber DEP site, Site feedback, etc., under Recruiter Only Forum.

To respond to a forum posting, click on the subtopic you want to respond to (to post a new topic, click on any subtopic in the forum of interest). The entire message thread will be shown. Click on the reply button to respond to that particular posting, or you can click on the reply to hyperlink at the bottom of the page (circle 5)

If you want to know who sent the message, that information is shown at #3 circle above. If you want to know more about that user (Flickd in this case), click on their user name (not their e-mail account), and you will see the user's profile.

If you want to post a new topic in this forum, click on the hyperlink "post new topic" button.

You can specify that you want a spell check performed on your posting before you post, which is highly recommended. That option is in the screen that comes up when you click reply or post new topic.

Appendix B: Sample means for DEP attrition probit estimates

Table 5 contains summary statistics for the samples used for the probit estimates of DEP attrition.

Table 5. Sample means for DEP probit estimates

Variable	Ever log on		Log on more than once		Took a test	
	Experiment	Control	Experiment	Control	Experiment	Control
Personal characteristics						
Male	78.4	82.8	74.5	82.8	75.2	82.7
HSDG	89.9	93.0	91.9	92.9	94.0	92.8
AFQT	59.9	51.5	59.5	51.7	64.6	51.6
Citizen	95.3	94.3	95.3	94.3	96.6	94.3
Caucasian	57.1	47.1	58.4	47.3	61.5	47.3
19 or older	56.4	45.3	52.3	45.8	51.3	45.8
Service charactersitcs						
Nuclear field	27.7	12.5	26.8	12.9	35.0	12.8
4YO school guarantee	34.5	38.8	32.9	38.8	28.2	38.8
Gendet	37.8	48.7	40.3	48.3	36.8	48.4
Law violation waiver	7.1	7.5	6.7	7.5	6.0	7.5
Drug waiver	2.4	1.9	2.0	1.9	1.7	1.9
Dependents waiver	1.7	1.2	2.0	1.2	1.7	1.3
Medical/physical waiver	1.4	1.5	2.0	1.5	2.6	1.4
Provisional waiver	1.4	1.8	2.0	1.8	.9	1.8
Minimum education waiver	5.4	2.3	3.4	2.4	3.4	2.4
Other waiver	.7	.7	0	.7	0	.7
DEP > 30 days	83.4	75.3	86.6	75.5	88.0	75.5
Shipped early	4.7	3.6	3.4	3.6	3.4	3.6
Shipped late	13.9	11.2	13.4	11.3	10.3	11.4
Geographic area						
Region North	15.2	19.5	16.1	19.3	16.2	19.3
Region South	33.1	27.7	30.2	28.0	26.5	28.1

Table 5.   Sample means for DEP probit estimates (continued)

Variable	Ever log on		Log on more than once		Took a test	
	Experiment	Control	Experiment	Control	Experiment	Control
Region Central	26.7	23.8	30.9	23.7	38.5	23.6
Region West	25.0	29.0	22.8	29.0	18.8	29.0
Current enlistment month						
November	9.1	5.6	10.7	5.7	9.4	5.7
December	13.9	5.0	13.4	5.3	12.8	5.3
January	21.3	9.5	17.4	9.9	17.9	10.0
February	14.9	7.6	13.4	7.8	12.0	7.9
March	11.5	6.4	9.4	6.6	7.7	6.6
April	4.1	5.6	4.0	5.6	5.1	5.5
May	5.7	9.8	8.7	9.6	10.3	9.5
June	7.8	15.9	8.7	15.7	6.0	15.7
July	7.4	19.6	10.1	19.2	11.1	19.1
August	4.1	13.6	4.0	13.4	7.7	13.2
September	.3	1.4	0	1.4	0	1.3
DEP attrition	12.5	18.4	12.1	18.2	9.4	18.2
Number of observations						
Nuclear field	82	624	40	666	41	665
4YO school guarantee	102	1,946	49	1,999	33	2,015
Gendet	112	2,441	60	2,493	43	2,510
Total	296	5,011	149	5,158	117	5,190

Appendix C: Probit estimates of DEP attrition

Table 6 contains the probit estimates of DEP attrition.

Table 6. Probit estimates for the probability of attriting from DEP

	Level of participation		
Variable	Ever log on	Log on more than once	Took a test
Intercept	-1.23**	-1.24**	-1.25**
Personal characteristics			
Male	-.23**	-.23**	-.22**
HSDG	.13	.12	.13
AFQT	.004*	.004*	.004*
Citizen	.22*	.22*	.22*
Caucasian	.14**	.14**	.13**
19 or older	-.04	.05	-.05
Service charactersitcs			
Nuclear Field	-.57**	-.59**	-.59**
Gendet	-.02	-.006	.002
Law violation waiver	-.16	-.16	-.16
Drug waiver	-.32	-.31	-.32
Dependents waiver	.09	.09	.08
Medical/physical waiver	-.46*	-.46*	-.45*
Provisional waiver	.40**	.42**	.41**
Minimum education waiver	-.01	-.03	-.03
Other waiver	.14	.11	.12
DEP > 30 days	.78**	.77**	.77**
Shipped early	-1.18**	-1.18**	-1.18**
Shipped late	.28**	.28**	.27**
Geographic area			
Region North	-.13	-.12	-.12
Region South	.06	.06	.06
Region Central	.01	.01	.02

Table 6.   Probit estimates for the probability of attriting
          from DEP (continued)

Variable	Level of participation		
	Ever log on	Log on more than once	Took a test
Current enlistment month			
November	-.51**	-.50**	-.51**
December	-.40**	-.41**	-.42**
January	-.63**	-.64**	-.64**
February	-.53**	-.53**	-.54**
March	-.44**	-.45**	-.47**
May	-.18	-.17	-.18
June	-.72**	-.72**	-.73**
July	-.82**	-.81**	-.82**
August	-1.14**	-1.13**	-1.14**
September	-.69	-.69**	-.69**
Cyber DEP participation[a]			
Nuclear field	-.66**	-.68*	-.73*
4YO school guarantee	-.53**	-.53*	-.44
Gendet	-.16	-.27	-.57*
Number of observations	5,307	5,307	5,307

a. Participant is defined by heading row, i.e., ever logged on, logged on more than
   once, or ever took a test.
** Statistically significant at the .01 level.
 * Statistically significant at the .05 level.

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